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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/811,048	03/15/2001	Mario Carlone	53130/29870	7289

7590

09/17/2002

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EXAMINER

MEHTA, ASHWIN D

ART UNIT

PAPER NUMBER

1638

DATE MAILED: 09/17/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/811,048

Applicant(s)

CARLONE, MARIO

Examiner

Ashwin Mehta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 March 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement filed 02 July 2001 fails to comply with 37 CFR 1.98(a)(1), which requires a list of all patents, publications, or other information submitted for consideration by the Office. It has been placed in the application file, but the information referred to therein has not been considered. The statement submitted with the references indicates that a PTO-1449 form was attached. However, no such PTO-1449 form was found.

### ***Claim Objections***

2. Claims 4, 12, 15, and 16 are objected to. In line 1 of the claims, the article "A" should be --The--.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation "G3601" in claims 1, 3, 5, 6, 9, 14, and 17 render the claims and those dependent thereon indefinite. Since the name "G3601" is not known in the art, the use of said

name does not carry art-recognized limitations as to the specific or essential characteristics that are associated with that denomination. The name "G301" does not clearly identify the claimed seeds, plants, and plant parts, and does not set forth the metes and bounds of the claimed invention. The name appears to have been arbitrarily assigned and can be changed. The specific characteristics associated therewith can also be modified. Amending claims 1, 6, and 9 to recite the ATCC deposit number in which seed of corn G3601 has been deposited would overcome the rejection.

In claim 4: there is improper antecedent basis for "protoplasts" in line 2. It is suggested that the term be removed from the claim, and that a new claim be introduced directed towards protoplasts produced from the tissue culture of claim 4.

In claim 9: the recitation "which has been deposited in the ATCC accession number X" in lines 1-2 renders the claim indefinite. It is not clear if it is the first generation hybrid corn or plant G3601 that the recitation is referring to.

In claims 10 and 11: the claims recite the recitation "the regenerable cells of the corn plant". There is insufficient antecedent basis for this limitation in the claim or the claims from which they depend.

In claim 14: the recitation "plants of inbred corn seed designated G3601 in Claim 13" in lines 2-3 renders the claim indefinite. Claim 13 is drawn to a seed that is not G3601, as it comprises a transgene, and therefore no longer expresses all of the same traits as G3601.

In claim 17: the recitation "plants of inbred corn seed designated G3601 in Claim 16" in lines 2-3 renders the claim indefinite. Claim 16 is drawn to a seed that is not G3601, as it comprises a mutant gene, and therefore no longer expresses all of the same traits as G3601.

In claim 18: the recitation "using the seed and its progeny" in line 4 renders the claim indefinite. The meaning of this recitation is not clear. The claim is also indefinite because the last step does not appear to be consistent with the preamble of the claim, which indicates that the method is for identifying G3601 seed. The steps of the method only indicate that plants that appear less robust are selected, and that they are self-pollinated.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 6-18 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims are broadly drawn towards any hybrid seed produced by a method comprising pollinating plants grown from corn line G3601 with another inbred line; hybrid seed produced by crossing a plant that has as an ancestor corn plant G3601, with another inbred line, and hybrid

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plants grown from said hybrid seed, and tissue culture of regenerable cells of said hybrid plant; an F1 hybrid corn plant produced by crossing G3601 with another inbred line, and preventing pollen production by one of the parents; G3601 comprising at least one transgene; seed of G3601 comprising at least one transgene; hybrid seed comprising at least one transgene, produced by hybrid combination of G3601 seed comprising at least one transgene, with another inbred line; corn plant G3601 comprising at least one mutant gene, and seed of said plant; ; hybrid seed comprising at least one mutant gene, produced by hybrid combination of G3601 seed comprising at least one mutant gene, with another inbred line; a method of identifying G3601 seed, comprising hybrid seed.

The specification describes numerous morphological and physiological traits of the maize plant arbitrarily designated G3601 (page 16, line 1 to page 19, line 21). The specification describes traits of a G3601 hybrid (page 22, line 1 to page 24, line 21). The specification also indicates that seed of G3601 will be deposited with the ATCC upon issuance of a patent (page 29, lines 12-29).

However, the specification does not describe all other hybrid corn plants produced by crossing G3601 with other inbred corn plants. The descriptions of G3601 and the hybrids discussed on pages 22-24 do not provide any information concerning the description of other hybrids produced from it. The hybrid of claim 7 does not even have to have corn plant G3601 as a parent, and can be separated from G3601 by any number of generations. Such a plant may not share any traits at all with G3601.

The description of G3601 is also not indicative of any transgenic plant or G3601 plants comprising one or more transgenes. Transgenes may be of any gene, including those that

affect more than one trait, or those that are not described by the specification or the prior art. For claims 12 and 13, it is suggested that the types of transgenes contemplated in the specification be listed, provided the prior art teaches those isolated genes (such as insect resistance genes).

The description of G3601 also is not indicative of any G3601 comprising mutant genes. Such plants would have different morphological and physiological traits, and may share no resemblance to G3601 at all, and no such plant is described. Given the breadth of the claims encompassing hybrid corn plants and G3601 further comprising any transgene(s) or mutant gene(s), and lack of guidance of the specification as discussed above, the specification fails to provide an adequate written description of the multitude of corn plants and their parts encompassed by the claims.

5. Claims 1-18 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Since the claimed seed of maize plant G3601 is essential to the claimed invention, it must be obtainable by a repeatable method set forth in the specification or otherwise be readily available to the public. If the seed is not so obtainable or available, a deposit thereof may satisfy the requirements of 35 U.S.C. 112. The specification does not disclose a repeatable process to obtain the exact same seed in each occurrence and it is not apparent if such a seed is readily available to the public.

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If the seeds are deposited under the terms of the Budapest Treaty, then an affidavit or declaration by the applicants, or a statement by an attorney of record over his or her signature and registration number, stating that the seeds will be irrevocably and without restriction or condition released to the public upon the issuance of a patent would satisfy the deposit requirement made herein. A minimum deposit of 2500 seeds is considered sufficient in the ordinary case to assure availability through the period for which a deposit must be maintained.

If the deposit will not be made under the Budapest Treaty, then in order to certify that the deposit meets the criteria set forth in 37 CFR 1.801-1.809, Applicants may provide assurance of compliance by an affidavit or declaration, or by a statement by an attorney of record over his or her signature and registration number showing that

(a) during the pendency of the application, access to the invention will be afforded to the Commissioner upon request;

(b) all restrictions upon availability to the public will be irrevocably removed upon granting of the patent;

(c) the deposit will be maintained in a public depository for a period of 30 years or 5 years after the last request or for the enforceable life of the patent, whichever is longer;

(d) the viability of the biological material at the time of deposit will be tested (see 37 CFR 1.807); and

(e) the deposit will be replaced if it should ever become inviable.

***Claim Rejections - 35 USC § 102 & 103***



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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-14 and 18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Johnson (U.S. Patent No. 5,80,342).

The claims are broadly drawn towards any hybrid seed produced by a method comprising pollinating plants grown from corn line G3601 with another inbred line; hybrid seed produced by crossing a plant that has as an ancestor corn plant G3601, with another inbred line, and hybrid plants grown from said hybrid seed, and tissue culture of regenerable cells of said hybrid plant; an F1 hybrid corn plant produced by crossing G3601 with another inbred line, and preventing pollen production by one of the parents; G3601 comprising at least one transgene; seed of G3601 comprising at least one transgene; hybrid seed comprising at least one transgene, produced by hybrid combination of G3601 seed comprising at least one transgene, with another inbred line; corn plant G3601 comprising at least one mutant gene, and seed of said plant; ; hybrid seed comprising at least one mutant gene, produced by hybrid combination of G3601 seed comprising at least one mutant gene, with another inbred line; a method of identifying G3601 seed, comprising hybrid seed.


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Johnson teaches seed of an inbred maize line designated "17DIA1," plants produced by growing said seed, and plants and plant parts having all of the physiological and morphological characteristics of 17DIA1 (col. 10, line 46 to col. 15, line 45; claims). It appears that the claimed plants and seeds of the instant invention may be the same as 17DIA1, given that they exhibit similar traits, such as a purple anther color, a purple glume color, and purple brace root color (Table 4). Alternatively, if the claimed plants, plant parts, and seeds of G3601 are not identical to 17DIA1, then it appears that 17DIA1 only differs from the instantly claimed plants, plant parts, and seeds due to minor morphological variation, wherein said minor morphological variation would be expected to occur in different progeny of the same cultivar, and wherein said minor morphological variation would not confer a patentable distinction to G3601. Johnson also teaches production of a tissue culture of regenerable cells from a plant of line 17DIA1, wherein regenerable cells are from tissues including flowers, pollen, ovules, among others; a plant produced from tissue culture of 17DIA1 that is capable of expressing all of the morphological and physiological traits of 17DIA1; methods for producing hybrid seeds and plants wherein a plant of inbred line 17DIA1 is crossed with another inbred corn plant, and the ensuing seed are harvested; method for producing 17DIA1 inbreds comprising planting a collection of seed of 17DIA1 and a hybrid, one of whose parents is 17DIA1, and identifying inbred 17DIA1 by decreased vigor; 17DIA1 comprising transgenes, as well as crossing the transformed plant with another plant to produce progeny comprising the inherited transgene, (col. 1, line 55 to col. 5 line 3; col. 18, line 50 to col. 31, line 25; claims). The claimed invention was *prima facie* obvious as a whole to one of ordinary skill in the art at the time it was made, if not anticipated by Johnson

8. No claim is allowed.

***Contact Information***

Any inquiry concerning this communication from the examiner should be directed to Ashwin Mehta, whose telephone number is 703-306-4540. The examiner can normally be reached on Mondays-Thursdays and alternate Fridays from 8:00 A.M to 5:30 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson, can be reached at 703-306-3218. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3014 and 703-872-9306 for regular communications and 703-872-9307 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

  
**ASHWIN D. MEHTA, PH.D**  
**PATENT EXAMINER**

September 15, 2002